



Project Name: Cottonwood Wash Barriers

Project Number: 1586-5-2F

Disaster Name: February 2005 Winter Storm and Flood

Location: Town of Pima

Lat/Long: 32° 53' 55.16" W / 109° 50' 0.75" W

State/Completion Dates: September 25, 2006 - May 18, 2007

PROJECT DESCRIPTION

The Town of Pima had a low-water crossing of Cottonwood Wash on 200 north. The crossing has 2 – 12" culverts underneath the concrete to handle small amounts of water. During large amounts of water including floods the Town barricades and ribbon tapes the crossing to keep motorists from crossing. The Town had built two (2) swing gates that could be closed during floods. The gates would make it where the Town would not have to have a police vehicle parked at this location for access control.

PROJECT SUMMARY

Cottonwood Wash drains 79.2 square miles of the Piñaleno Mountain Range foothills and is the largest watercourse that drains through the Town of Pima. Cottonwood Wash is delineated as a Special Flood Hazard Area by the Federal Emergency Management Agency (FEMA). The FEMA regulatory 100-year peak discharge estimate for the crossing location is 12,900 cfs. Prior to 1950, 200 North served as part of the old U.S. Highway 70 alignment through the Town of Pima, with a bridged crossing at Cottonwood Wash. The bridge was removed after suffering extensive damages during the 1983 floods, and was replaced with an at-grade, concrete low water crossing fitted with small pipes to convey the intermittent base flows.

Most significant rainfall events that occur within the Cottonwood Wash watershed cause sufficient flooding to render the crossing impassable and create a life threatening circumstance to motorists who would try to cross. The 100-year peak discharge estimated for Cottonwood Wash at the crossing location is 12, 900 cfs, which flows over the crossing at a depth of over ten (10) feet. The Town and local residents faced a 50 percent probability that the wash will be rendered impassable by flooding in any given year.

The intent of the project is to design and construct barrier gates at the east and west entrances of the crossing. The gates will be closed by emergency personnel or Town staff, to prevent citizens from attempting to cross during flooding conditions. The gate locations are selected to be as close to the outer limits of the 100-year floodplain as possible, while still preventing access to the crossing from the main and side roads. From a vehicular access barrier perspective, the protection offered by the gates is considered to be full 100-year protection since the flooding depths and velocities at the floodplain fringe would typically not pose any significant threat to a motorist parked next to the gate.

PHOTOS

Before



The Cottonwood Wash project was approved by FEMA on August 14, 2006. The Federal Share is \$10,043 and the Non-Federal Share is \$2,457.

After



Cottonwood Wash Barriers